

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Aslanis, Jr.
Art Unit	
Examiner Name	
Attorney Docket Number	TI-27730A.1B

Sheet 1

of

4

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 4450558	05-22-1984	Hampton et al.	all
		US- 4644523	02-17-1987	Horwitz	all
		US- 5170413	12-08-1992	Hess et al.	all
		US- 5305349	04-19-1994	Dent	all
		US- 5345440	09-06-1994	Gledhill et al.	all
		US- 5440561	08-08-1995	Werronen	all
		US- 5444697	08-22-1995	Leung et al.	all
		US- 5590160	12-31-1996	Ostman	all
		US- 5666378	09-09-1997	Marchetto et al.	all
		US- 5673296	09-30-1997	Ohgane	all
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		WO 95/05042	02-16-1995	Univ. Brit.Col.	all	
		EP 0529421 A2	03-03-1993	Daimler-Benz	all	
		WO 93/09617	05-13-1993	Motorola	all	
		WO 95/03656	02-02-1995	Telia AB	all	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	
				Filing Dat	
				First Named Inventor	Aslanis, Jr.
				Art Unit	
				Examiner Name	
Sheet	2	of	4	Attorney Docket Number	TI-27730A.1B

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		CIMINI, "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing", Trans. Comm. Vol. COM-33, No. 7 (1985).	
		BINGHAM, "Multicarrier Modulation for Data Transmission: An Idea Whoes Time Has Come", Communications Magazine (IEEE, May 1990), pp. 5-14.	
		CHOW et al., "DMT Initialization: Parameters Needed for Specification in a Standard", Submission T1E1.4/93-022 (Mar. 1993).	
		CHOW et al., "A Discrete Multitone Transceiver System for HDSL Applications", J. Sel. Areas Comm., Vol. 9, No. 6 (IEEE, 1991), pp. 895-908.	
		CHOW et al., "Equalizer Training Algorithms for Multicarrier Modulation" (1993), pp. 761-765.	
		KIRKMAN et al., "Detection of Characteristic Phases Using FFTs", ICASSP (IEEE, March 1992).	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Application Number	
				Filing Date	
				First Named Inventor	Aslanis, Jr.
				Art Unit	
				Examiner Name	
Sheet	3	of	4	Attorney Docket Number	TI-27730A.1B

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Proakis, <u>Digital Communications</u> , 2d ed. (McGraw-Hill, Inc., 1989), pp. 396-99 and 862-65.	
		Cioffi et al., "DMT Specification Overview for ADSL", Submission T1E1.4/93-083 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (April 15, 1993).	
		Cioffi et al., "Detailed DMT Transmitter Description for ADSL", Submission T1E1.4/93-084 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (April 15, 1993).	
		Chow et al., "Recommended Reverberation Training Sequence-Revision 1", Submission T1E1.4/93-086-R1 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (May 10, 1993).	
		Cioffi et al., "Recommended Training Sequence for SNR Computation with DMT ADSL", Submission T1E1.4/93-087 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (May 10, 1993).	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: C mmissi ner for Patents, P.O. B x 1450, Alexandria, VA 22313-1450.

If you need assistance in completing th form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	
				Filing Date	
				First Named Inventor	
				Art Unit	
				Examiner Name	
(Use as many sheets as necessary)				Attorney Docket Number	
Sheet	4	of	4	TI-27730A.1B	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Cioffi et al., "Modification to DMT Synchronization Pattern Insertion", Submission T1E1.4/93-089 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (April 15, 1993).	
		Chow, "Recommended Reveille Sequence for DMT ADSL", Submission T1E1.4/93-114 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (May 10, 1993).	
		Bingham, "Proposed Standard: Sections 6.6-6.10 & 7.6-7.10 Encoders, Modulators, Cyclic Prefices, DACs, and Anti-aliasing Filters", Submission T1E1.4/93-120 to the T1E1.4 Working Group of Committee T1, sponsored by the Alliance for Telecommunications Information Solutions and accredited by the American National Standards Institute (May 10, 1993).	
		"Asymmetric Digital Subscriber Line (ADSL) WORKING DRAFT Standard", Marshall, ed., (T1E1.4 Working Group of Committee T1, November 15, 1993).	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: C mmlssl ner for Patents, P.O. B x 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.